REMARKS

Favorable reconsideration of this application is respectfully requested in view of the previous amendments and following remarks.

Claim 28 is rejected as failing to comply with the written description requirement. The present amendment cancels that claim. Accordingly, that rejection is moot.

Before turning to the prior art rejections, a brief discussion of a catheter according to a disclosed embodiment is provided. A catheter 1 includes a proximal shaft 15, an intermediate member 14 connected to the front side of the proximal shaft 15, a distal shaft 13 connected to the front portion of the intermediate member 14, a balloon 12 connected at the front portion of the distal shaft 13, and a guide wire lumen 11 allowing a guide wire to be inserted therethrough. The guide wire lumen 11 includes a distal side aperture 111 positioned on the distal side from the front end of the balloon 12 and a proximal side aperture 141 formed in the side surface of the intermediate member 14. The front portion of the distal shaft 13, positioned on the rear side from the balloon 12, is configured as a grooved portion 131 having a groove 132. As discussed in the paragraph starting on line 10 of page 14 and as illustrated in Fig. 1, the grooved portion 131 is provided at a portion adjacent to the balloon 12 and extends toward the proximal side of the distal shaft 13. As further illustrated in Fig. 1, a rear portion of the distal shaft 13 is free of grooves.

Turning now to the claims, Claim 1 is rejected as being unpatentable over Wijeratne in view of Berg.

As amended, Claim 1 recites a catheter including, *inter alia*, a proximal shaft, an intermediate member connected to a front side of the proximal shaft, a distal

shaft connected to a front portion of the intermediate member, a balloon connected at a front portion of the distal shaft, and a guide wire lumen for allowing a guide wire to be inserted through the guide wire lumen. The guide wire lumen includes a distal side aperture positioned on the distal side from a front end of the balloon and a proximal side aperture formed in a side surface of the intermediate member. The front portion of the distal shaft is configured as a grooved portion having a groove and is positioned on a rear side of the balloon, and a rear portion of the distal shaft is free of grooves. The grooved portion is provided at a portion adjacent to the balloon and extends toward a proximal side of the distal shaft.

In discussing Claim 1, the Official Action correctly notes that Wijeratne's catheter does not include a front portion, positioned on a rear side from a balloon, of a distal shaft configured as a grooved portion having a groove, or that a grooved portion is provided at a portion adjacent to a balloon. The Official Action goes on to take the position that it would have been obvious to an ordinarily skilled artisan in view of Berg to have modified Wijeratne's outer body tube 22 to include a front portion, positioned on a rear side from a balloon, configured as a grooved portion having a groove, and to provide the grooved portion at a portion adjacent to the balloon member 22, with the result that Wijeratne's outer body tube 22 corresponds to a distal shaft as recited, "in order to provide a device having increased flexibility for better maneuverability". Applicants respectfully disagree.

As a first point, Wijeratne fails to disclose providing a groove on the outer body tube 22 adjacent the balloon 21, or otherwise selectively modifying the flexibility of that portion of the outer body tube 22. Instead, "(t)he illustrated distal end assembly includes a balloon member 21 which is made of a material suitable for a

dilatation balloon and in accordance with an appropriate molding approach for that material. The balloon member 21 is securely attached to an outer body tube 22, which outer body tube is attached at its other end to the transition assembly 15" (lines 37-43 of column 4 of Wijeratne).

Turning next to Berg, Berg discloses a catheter including a dilation catheter 52 connected to a shaft 56 of a guide catheter 54. The shaft 56 includes a grooved transition zone 61, so as to increase the flexibility of that portion of the catheter. As discussed in lines 41-43 of column 8 of Berg, the transition zone 61 is used to change the flexibility of the guide catheter 54 itself. Moreover, as can be seen in Fig. 9, the transition zone 61 is not provided at the portion adjacent to a balloon. Clearly, Berg is also not concerned with selectively modifying the flexibility of a portion of a shaft adjacent a balloon.

Accordingly, it would not have been obvious in view of Berg to have modified Wijeratne's outer body tube 22 to have included a front portion configured as a grooved portion having a groove and positioned on a rear side of the balloon member 21, where the grooved portion is provided at a portion adjacent to the balloon member 21.

Moreover, Claim 1 is amended to recite that the rear portion of the distal shaft is free of grooves and that the grooved portion provided at a portion adjacent to the balloon extends toward a proximal side of said distal shaft. Even with the proposed modification, the Wijeratne catheter would not have include those features.

Therefore, neither Wijeratne nor Berg, alone or in combination, discloses or suggests a catheter having a front portion of a distal shaft configured as a grooved portion having a groove, and positioned on a rear side of the balloon, and a rear

portion of the distal shaft free of grooves, where the grooved portion is provided at a portion adjacent to the balloon and extends toward a proximal side of the distal shaft, in combination with the other features recited in amended Claim 1.

Accordingly, amended Claim 1 is allowable over Wijeratne in view of Berg, and withdrawal of the rejection of Claim 1 is respectfully requested.

Independent Claim 25 is rejected as being unpatentable over Wijeratne in view of Berg, Keith and design choice.

Amended Claim 25 recites a catheter including, *inter alia*, front portion of a distal shaft configured as a grooved portion having a groove and positioned on a rear side of the balloon, and a rear portion of the distal shaft is free of grooves, where the grooved portion is provided at a portion adjacent to the balloon and extends toward a proximal side of the distal shaft.

For the reasons discussed above with respect to Claim 1, neither Wijeratne nor Berg, alone or in combination, discloses or suggests a catheter having a front portion of a distal shaft configured as a grooved portion having a groove and positioned on a rear side of the balloon, and a rear portion of the distal shaft free of grooves, where the grooved portion is provided at a portion adjacent to the balloon and extends toward a proximal side of the distal shaft, in combination with the other features recited in amended Claim 25. Moreover, neither Keith nor the Official Action's assertions regarding design choice cure the above-discussed deficiencies in Wijeratne and Berg.

Accordingly, amended Claim 25 is allowable over Wijeratne in view of Berg, Keith and design choice, and withdrawal of the rejection of Claim 25 is respectfully requested.

Independent Claim 29 is rejected as being unpatentable over Wijeratne in view of Berg.

Claim 29 recites a catheter including, *inter alia*, a front portion, positioned on a rear side from a balloon, of a distal shaft configured as a grooved portion having a groove, and a rear portion of the distal shaft is free of grooves, where the grooved portion is provided at a portion adjacent to the balloon and extends toward a proximal side of the distal shaft.

For the reasons discussed above with respect to Claim 1, neither Wijeratne nor Berg, alone or in combination, discloses or suggests a catheter having a front portion, positioned on a rear side from a balloon, of a distal shaft configured as a grooved portion having a groove, and a rear portion of the distal shaft is free of grooves, where the grooved portion is provided at a portion adjacent to the balloon and extends toward a proximal side of the distal shaft, in combination with the other features recited in Claim 29.

Accordingly, Claim 29 is allowable over Wijeratne in view of Berg, and withdrawal of the rejection of Claim 29 is respectfully requested.

The dependent claims are allowable at least by virtue of their dependence from allowable independent claims. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful

in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: January 27, 2009

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